



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,083	02/26/2002	Hyun S. Kim	3672-86512	8063

24628 7590 03/06/2003

WELSH & KATZ, LTD
120 S RIVERSIDE PLAZA
22ND FLOOR
CHICAGO, IL 60606

EXAMINER

ILAN, RUTH

ART UNIT	PAPER NUMBER
----------	--------------

3616

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant N .

10/083,083

Applicant(s)

KIM, HYUN S.

Examiner

Ruth Ilan

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

The oath and declaration is defective because the inventor Hoon Y. Kim's type written name has been deleted, although two signatures are provided. The two signatures are provided in the location designated "Full name of sole or one joint inventor." It is unclear if both Hoon Y. Kim and Hyun S. Kim are joint inventors living at the same address, or if only Hyun S. Kim is an inventor. As such, the continuation-in-part status of this application is suspect, since a continuation-in-part application must have at least one common inventor. Clarification, and a new declaration are required.

The declaration is additionally defective because it is not proper to claim benefit under 35 USC 120 to a provisional application, this benefit should be claimed under 35 USC 119(e.)

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "200" has been used to designate all the straps shown in Figures 11-13. Additionally, "220" and "222" have been used to designate more than

one tether in Figure 13. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. Figure 13 is additionally objected to because it contains both an exploded view of the harness, and additionally the 4-point seat harness (192.) The Examiner suggests providing the 4-point harness 192 with its own Figure number. The same is true in Figure 15, where there appear to be two separate exploded views. Also regarding Figure 13, the Y-shaped tether should be labeled "224", as indicated in the specification.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 206c and 206d, as mentioned on page 11. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, regarding claims 10 and 14, the third strap attached to the first and second ends of both the first and second straps must be shown or the feature(s) canceled from the claim(s). It appears from the drawings that the first and second ends of the shoulder straps are next to, but not attached to the belt strap. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

6. The abstract of the disclosure is objected to because in the first line it states, "provides superior protection". The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art. Correction is required. See MPEP § 608.01(b).

7. In paragraph [0022], line 2 "restrain" should be "restraint".

8. The disclosure is objected to because paragraph [0026] is inaccurate. The impact on a passenger is not the sum of the speed of the vehicle at the moment of impact and the speed of the air bag as it deploys toward the passenger. First of all, both the passenger and the air bag are traveling with the vehicle and so before deployment, their relative velocity is 0 km/hr. When the air bag deploys, (that is for instance on impact, or some other air bag deployment event) the passenger's head will have a certain velocity that can be derived based on the velocity of the car, and the deceleration, and the weight of the passengers head, but it is not the speed of the vehicle. Additionally, it is inaccurate to use km/hr as the units for impact.

Appropriate correction is required.

9. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 10 and 14 include the limitation of "a third strap....attached to said first and second ends of both said first and second straps..."

There is not support for the limitation "attached" because the specification only indicates

Art Unit: 3616

the relative placement of the belts, but not their attachment to each other. Please see for instance paragraph [0050]. Additionally the figures appear to show the ends of the shoulder straps floating near, but not attached to the torso belt.

Claim Objections

10. Claims 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 recites the limitation "wherein at least one of the straps is adjustable", this limitation was previously recited in claim 13, which states, in line 5, "at least one of the straps being adjustable".

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the restraint system" in lines 2-3 and "the seat of the automobile" in line 5. Claim 13 recites "the seat" in line 12. There is insufficient antecedent basis for these limitations in the claim. The Examiner suggests amending "the" to "a" in each of these cases.

Art Unit: 3616

Regarding claims 6 and 7, which each recite “a tether anchor”, these recitations are unclear because “a tether anchor” has already been recited in claim 5. It is not known if what is intended are further tether anchors.

Regarding claim 8, line 2 recites “shoulder belts” and line 3 recites “the shoulder belt”. Because shoulder belts are introduced in the claim as a plural, the recitation of “the shoulder belt” lacks antecedent basis. The Examiner suggests changing “shoulder belts” in line 2 to “a shoulder belt”.

Regarding claims 10 and 14, because of the lack of support in the specification and the drawings for the “attachment” of the ends of the shoulder straps to the third belt as indicated in paragraphs sections 5 and 9 above, the metes and bounds of “attached” are difficult to ascertain. For the purposes of examination, it will be assumed that the first and second shoulder straps are associated with the third or belt strap in a generally perpendicular manner.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1, 2, 4-6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Rupert et al. (US 4,226,474.) Rupert (Figures 1 and 2) teaches a supplemental restraint system for use in a vehicle including a harness (1) having a plurality of belts

Art Unit: 3616

(11,12,13,and 14) and being wearable by the rider (as seen in Figure 1) such that when the rider wears the harness the rider is secured to the seat (63) of the automobile such that the rider remains secured against the seat of the car by tethers (53, 54, 57 and 58.)

Regarding claim 2, Rupert et al. teaches an embodiment that includes a lap belt that works in conjunction with the harness (as shown in Figure 7.) Regarding claims 5 and 6, (as taught in col. 3, lines 63-68) the tethers are straps having a first end attachable to the harness and a second end attachable to a tether anchor. Regarding claim 9, the plurality of belts are worn about the upper torso of a user such that a first one of the belts (13) is worn about the waist of the user and others of the belts (11,12) are attached to the first belt and extend over the shoulders of the user.

15. Claims 1, 2, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Lipper et al. (US 5,429,418.) Lipper et al. (Figure 6) teaches a supplemental restraint system for use in a vehicle including a harness (1) having a plurality of belts) and being wearable by the rider (as seen in Figure 1) such that when the rider wears the harness the rider is secured to the seat of the automobile such that the rider remains secured against the seat of the car (as taught in col. 6 lines 48-61.) Regarding claims 2 and 8, the lap and shoulder belt work in conjunction with the harness and the harness has means (628, 628) to secure the shoulder belt to the harness. Regarding claim 9, the plurality of belts are worn about the upper torso of a user such that a first one of the belts (614) is worn about the waist of the user and others of the belts (602,608) are attached to the first belt and extend over the shoulders of the user.

Art Unit: 3616

16. Claims 1, 2, 4-6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Murray (US 5,733,014.) Murray (Figures 1,2,7 and 10) teaches a supplemental restraint system for use in a vehicle including a harness (10) having a plurality of belts and being wearable by the rider (as seen in Figure 1) such that when the rider wears the harness the rider is secured to the seat of the automobile such that the rider remains secured against the seat of the car by tethers (seat strap portion 14, as shown in Figure 9, or alternately in Figure 1053, 54, 57 and 58.) Regarding claim 2, Murray teaches that the lap belt (24) works in conjunction with the harness (see Figure 1 and col. 6, lines 44-47) Regarding claims 4-6 (as shown in Figure 10) the tethers are straps having a first end (164a, 164b) attachable to the harness and a second end attachable to a tether anchor (158, 156). Regarding claim 9, the plurality of belts are worn about the upper torso of a user such that a first one of the belts is worn about the waist of the user and others of the belts (11,12) are attached to the first belt and extend over the shoulders of the user (see Figure 2.)

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. As indicated above, it is unclear if this application currently names joint inventors.

In considering patentability of the claims under 35 U.S.C. 103(a), the examiner

Art Unit: 3616

presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 3-6, 13, 17, 18, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper et al. (US 5,429,418) in view of Rupert et al. (US 4,226,474) or Murray (US 5,733,014.) Lipper et al. is discussed above and in addition to the elements discussed above, further teaches that at least one of the straps (see Figure 6) is adjustable (see col. 6, line 50.) While Lipper et al. teaches that the harness works in conjunction with the seat belt and lap belt, and as such forms a 3-point restraint system. Lipper et al. fails to teach that this conjunction is such that when the harness is secured to the lap and shoulder belt of the vehicle the harness forms a five- point restraint system , or uses tethers. Both Rupert et al. and Murray teach safety harnesses that work in conjunction with existing seat belt systems and include additional tether systems that include tethers that attach to the shoulders of the harness to hold the back of the rider to a seat (see Rupert et al. Figure 6) and to spread out the load or force that the rider feels from an accident so as to lessen the injury from the seat belt (see Murray, col. 6, line 50.) It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the safety harness of Lipper et al. to include an additional

two-points of restraint at the shoulders, as taught by both Rupert et al. or Murray, in order to hold the back of the rider to the seat and to spread out the load or force that the rider feels from an accident. Lipper et al. in view of Rupert et al. or Murray meets the limitations of a five-point restraint, which includes the three from the lap/shoulder belt, and the two additional shoulder restraints.

20. As best understood, claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper et al. (US 5,429,418) in view of Olaiz (US 5,927, 235.) Lipper et al. is discussed above and for those elements not previously discussed, Lipper et al. additionally teaches that the shoulder straps are associated with the belt strap in a generally perpendicular manner (based on the 112 2nd interpretation indicated above) and additionally that the shoulder straps are arranged in an X-shape. Lipper et al. additionally teaches that the belt (614) is closed around the wearer by hook and loop fasteners, but does not show this connection, and as such fails to teach that the third strap has first and second end attachment points and is of a length such that the first and second ends of the third strap may be attached to the attachment points such that the first and second ends of the third strap overlap one another. Olaiz (Figure 3) teaches a belt for a harness that uses hook and loop fasteners and includes first and second attachment points on the belt (B and D as noted by the Examiner in Figure 3 of Olaiz) such that the first and second ends (A and C) of the belt are attached to the first and second attachment points, and the belt is of a length so as to cause overlap of the first and second ends of the belt. This configuration with hook and loop fasteners is useful because it allows for adjustment of the waistband to allow for a secure

Art Unit: 3616

connection with wearers of different sizes (see col. 3, lines 32-34.) It would have been obvious to one having ordinary skill at the time of the invention to include with the hook and loop connection of Lipper et al. an arrangement as taught by Olaiz, in order to provide an adjustable, and secure connection for the belt that accommodates users of various sizes.

21. As best understood, claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper et al. (US 5,429,418) in view of Rupert et al. (US 4,226,474) or Murray (US 5,733,014) as applied to claim 13 above, and further in view of in view of Olaiz (US 5,927, 235.) Lipper et al. in view of Rupert et al. or Murray is discussed above and for those elements not previously discussed, Lipper et al. additionally teaches that the shoulder straps are associated with the belt strap in a generally perpendicular manner (based on the 112 2nd interpretation indicated above) and additionally that the shoulder straps are arranged in an X-shape. Lipper et al. additionally teaches that the belt (614) is closed around the wearer by hook and loop fasteners, but does not show this connection, and as such fails to teach that the third strap has first and second end attachment points and is of a length such that the first and second ends of the third strap may be attached to the attachment points such that the first and second ends of the third strap overlap one another. Olaiz (Figure 3) teaches a belt for a harness that uses hook and loop fasteners and includes first and second attachment points on the belt (B and D as noted by the Examiner in Figure 3 of Olaiz) such that the first and second ends (A and C) of the belt are attached to the first and second attachment points, and the belt is of a length so as to cause overlap of the first and second ends of

the belt. This configuration with hook and loop fasteners is useful because it allows for adjustment of the waistband to allow for a secure connection with wearers of different sizes (see col. 3, lines 32-34.) It would have been obvious to one having ordinary skill at the time of the invention to include with the hook and loop connection of Lipper et al. in view of Rupert et al. or Murray an arrangement as taught by Olaiz, in order to provide an adjustable, and secure connection for the belt that accommodates users of various sizes.

22. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rupert et al. in view of Bowtell (AU 9959355 A). Rupert et al. is discussed above and teaches all elements of the claimed invention except that the tether straps are not taught as being Y-shaped. Rupert et al. teaches that the tether straps for the shoulder may be attached to suitable eyebolts on the floor of the vehicle (see col. 3, line 68.) Bowtell (Figure 1) teaches a harness restraint system used in conjunction with a seat belt (8) of a vehicle that includes a Y-shaped portion which allows attachment between the shoulder areas of the harness (at around 12) and a single point above the seat. (11.) It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the tether arrangement of Rupert et al. to include a Y-shape as taught by Bowtell, in order to eliminate at least one of the anchors on the floor of the vehicle, or to place a single anchor in a more easily installable location.

23. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rupert et al. in view of Bowtell (AU 9959355 A) as applied to claim 7 above, and further in view of Lipper et al. (US 5,429,418.) Rupert et al. in view of Bowtell et al. is discussed above

Art Unit: 3616

and teaches all elements of the claimed invention but does not teach that at least one of the straps is adjustable. Lipper et al. (Figure 6, and col. 6, line 50) teaches adjustable straps on a child harness to accommodate children of different sizes. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the straps of Rupert et al. in view of Bowtell to include adjustable straps as taught by Lipper et al. in order to accommodate children of different sizes, and to extend the useful life of the restraint harness to grow with the child.

24. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipper et al. (US 5,429,418) in view of Rupert et al. (US 4,226,474) or Murray (US 5,733,014.) as applied to claim 17 above, and further in view of Bowtell (AU 9959355 A). Lipper et al. (US 5,429,418) in view of Rupert et al. (US 4,226,474) or Murray (US 5,733,014) is discussed above and teaches all elements of the claimed invention except that the tether straps are not taught as being Y-shaped. Both Rupert et al. (col. 3, line 68) and Murray (Figure 10) teaches that the tether straps for the shoulder may be attached to the floor of the vehicle in an arrangement that requires two anchor points. Bowtell (Figure 1) teaches a harness restraint system used in conjunction with a seat belt (8) of a vehicle that includes a Y-shaped portion which allows attachment between the shoulder areas of the harness (at around 12) and a single point above the seat. (11.) It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the tether arrangement of Lipper et al. in view of Rupert et al. or Murray to include a Y-shape as taught by Bowtell, in order to eliminate at least one of

Art Unit: 3616

the anchors on the floor of the vehicle, or to place a single anchor in a more easily installable location on a modern vehicle.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tucker and Spinosa et al. teach 5-point restraint systems of interest. Van Druff et al. teaches a Y-shaped tether of interest. Bolcerek, Masuda et al., Silverman, Roberson et al., Jeong, Roberts and Arthur teach harnesses that interact with the existing seat belts of interest. Crane teaches an overlapping belt of interest. Betz teaches a single point anchor for a harness of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth Ilan whose telephone number is 703-306-5956. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

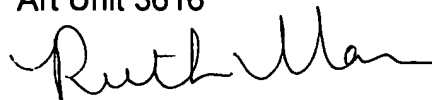
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Ruth Ilan

Examiner

Art Unit 3616



3/1/03

RI

March 1, 2003